

FARM FACTS

New Pasture Development Costs

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Introduction

This publication provides a format for calculating the cost of developing a new pasture. The cost of establishing a pasture with crested wheatgrass - alfalfa, and meadow brome grass - alfalfa is shown on a soil zone basis. Machine costs are similar for each soil zone and are calculated on developing 160 acres of new pasture.

The machinery cash and non-cash costs are based on figures in the Farm Machinery Custom and Rental Rate Guide 1998. Costs and machine size can vary significantly, therefore individual costs should be used when available.

The costs are broken down into cash (fertilizer, herbicide, fuel, lubrication and repairs) and non cash costs (machine depreciation, investment costs). Investment costs include the cost of constructing two miles of three standard barbed, two-strand wire all post fence, and the construction of a 3000 yd³ dugout. When considering any form of water source contact your nearest PFRA office before construction. Ensure that any buried infrastructure is located before any excavation is started.

The forage is seeded into standing crop stubble in the spring of the year. The year prior to seeding one litre of glyphosate is sprayed on the crop in mid-August to desiccate the crop along with any perennial weeds. In mid October .36 litres of 2,4-D are sprayed to kill winter annuals.

Fertilizer and seeding rates are based on the recommended rates for each soil zone, but may vary according to specific areas and conditions.

Grazing capacity is based on an animal unit month (AUM), defined as the amount of feed consumed by an animal unit in one month.

Various one animal unit examples are listed below.

1 mature (1000 lb) cow with
or without unweaned calf at
side

2 weaned calves

1.25 yearling heifers

.75 bulls over 2 years old

.7 horses (1000 lbs.)

8 weaned lambs

4 white-tailed deer (160 lbs.)

For more detailed information on grazing capacity, agronomics, seed varieties, lease arrangements, fencing, and machinery costs refer to the following publications.

- Dryland Forage Production Costs
- Fencing Costs
- Pasture Lease Agreements.
- Saskatchewan Forage Crop Production Guide 2000
- Farm Machinery Custom and Rental Rate Guide 1998

Brown Soil Zone: Cost per acre to develop 160 acres of new pasture			Dark Brown Soil Zone: Cost per acre to develop 160 acres of new pasture			Black Soil Zone: Cost per acre to develop 160 acres of new pasture		
Forage seeded: Crested wheatgrass and Alfalfa			Forage seeded: Crested wheatgrass and Alfalfa			Forage seeded: Meadow Bromegrass and Alfalfa		
	Dollars	Your		Dollars	Your		Dollars	Your
	Per	Estimate		Per	Estimate		Per	Estimate
Cash Costs:	Acre	Per Acre	Cash Costs:	Acre	Per Acre	Cash Costs:	Acre	Per Acre
Seeding Costs			Seeding Costs			Seeding Costs		
1 - 20' press drill & Tractor	\$2.40		1 - 20' press drill & Tractor	\$2.40		1 - 20' press drill & Tractor	\$2.40	
Spraying 2 times (custom)	\$6.10		Spraying 2 times (custom)	\$6.10		Spraying 2 times (custom)	\$6.10	
1 litre glyphosate	\$8.50		1 litre glyphosate	\$8.50		1 litre glyphosate	\$8.50	
.36 litres 2 4-D	\$2.90		.36 litres 2 4-D	\$2.90		.36 litres 2 4-D	\$2.90	
Alfalfa seed (1 lb./acre)	\$2.60		Alfalfa seed (1 lb./acre)	\$2.60		Alfalfa seed (3 lbs./acre)	\$7.80	
Crest wheatgrass (3 lbs./ac)	\$6.00		Crest wheatgrass (4 lbs./ac)	\$8.00		Meadow bromegrass (10 lbs./ac)	\$27.00	
Fertilizer 15 lbs P/ac x \$.27/lb.	\$4.05		Fertilizer 15 lbs P/ac x \$.27/lb.	\$4.05		Fertilizer 15 lbs P/ac x \$.27/lb.	\$4.05	
Taxes	\$1.88		Taxes	\$2.19		Taxes	\$2.50	
Fence repair	\$0.31		Fence repair	\$0.31		Fence repair	\$0.31	
Total Cash Costs	\$34.74		Total Cash Costs	\$37.05		Total Cash Costs	\$61.57	
Non-Cash Costs:			Non-Cash Costs:			Non-Cash Costs:		
Land Costs			Land Costs			Land Costs		
Interest on Investment	\$4.69		Interest on Investment	\$6.25		Interest on Investment	\$7.81	
Fence	\$3.40		Fence	\$3.40		Fence	\$3.40	
Deprec. & Interest on Equipment	\$2.82		Deprec. & Interest on Equipment	\$2.82		Deprec. & Interest on Equipment	\$2.82	
Dugout investment	\$1.50		Dugout investment	\$1.50		Dugout investment	\$1.50	
Total Non-Cash Costs	\$12.40		Total Non-Cash Costs	\$13.97		Total Non-Cash Costs	\$15.53	
Total Cash Costs/Acre	\$34.74		Total Cash Costs/Acre	\$37.05		Total Cash Costs/Acre	\$61.57	
Total Non cash Costs/acre	\$12.40		Total Non cash Costs/acre	\$13.97		Total Non cash Costs/acre	\$15.53	
Total pasture costs/acre	\$47.15		Total pasture costs/acre	\$51.02		Total pasture costs/acre	\$77.10	

Assumptions:

1. Total pasture acres developed 160 acres

2. Land investment calculated at 5%

3. Machine Operations:

Land Preparation Custom Spraying 2x

Grass Seeding/seed placed fert. 20' press drill - 1 operation

4. Seeding Rates:

<u>Soil Zone</u>	<u>Crop</u>	<u>Seeding rate lbs./ac</u>
Brown	Crested wheatgrass and alfalfa	3 + 1
	Meadow brome grass and alfalfa	8 + 3
Dark Brown	Crested Wheatgrass and alfalfa	4 + 1
	Russian Wildrye grass and alfalfa	3 + 1
	Meadow brome grass and alfalfa	9 + 3
	Smooth brome grass and alfalfa	7 + 1
Black	Meadow brome grass and alfalfa	10 + 3
	Meadow brome grass	12
	Smooth brome grass and alfalfa	7 + 1
	Crested Wheatgrass and alfalfa	6 + 1
	Intermediate wheatgrass and alfalfa	11 + 1
	Russian wildrye grass	6

5. Stocking Rates for Pastures AUM (animal unit months per acre)

<u>Soil Zone</u>	<u>AUM</u>	
Brown	.7	To convert to acres required per animal unit per month use the formula: 1/AUM per acre = acres/month/animal unit
Dark Brown	1.1	
Black	1.2	

6. Price of Seed

Seed	\$/lb
Alfalfa	2.60
Smooth Brome grass	2.70
Crested Wheatgrass	2.00
Intermediate wheatgrass	3.30

7. Fertilizer Use:

	<u>Lbs./ac</u>	<u>\$/Lb. (actual)</u>
Nitrogen		.22
Phosphate	15 lb - seed placed.	.27

8. Fencing Costs

4 standard barbed, 2 strand wire, all posts	\$3,006/mile
3 standard barbed, 2 strand wire, all posts	\$2,717/mile
110 volt electric fence	\$1,582/mile

9. Herbicide Costs

1 liter glyphosate	\$8.50
.36 liters 2 4 - D	\$3.00

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